

WHAT IS CLAIMED IS:

1. A method of diagnosing a lubricated portion comprising the steps of:

filtrating a lubricating oil picked up from the lubricated portion so as to separate a large-diameter metal particle;

thereafter measuring a metal concentration of a solution formed by dissolving said large-diameter metal particle by an acid in accordance with an emission spectrometry and measuring a metal concentration of a filtrate in accordance with the emission spectrometry; and

diagnosing a state of said lubricated portion on the basis of the respective metal concentrations of said solution and said filtrate.

2. A method of diagnosing a lubricated portion as claimed in Claim 1, wherein the state of said lubricated portion is diagnosed by determining an wear depth in said lubricated portion from a total value of the respective metal concentrations of said solution and said filtrate, and on the basis of a rate of change of said wear depth in accordance with a time elapse.

3. A method of diagnosing a lubricated portion as claimed in Claim 1, wherein said lubricating oil is filtrated by a filter having a hole diameter between 0.01 and 10.00 μm .

4. A method of diagnosing a lubricated portion as claimed in Claim 1, wherein said emission spectrometry is constituted by an analyzing method using an inductively coupled plasma.

5. A system of diagnosing a lubricated portion comprising:

a filtrating means for filtrating a lubricating oil picked up from the lubricated portion so as to separate a large-diameter metal particle;

an emission spectrometry means for measuring respective metal concentrations of a solution formed by dissolving said large-diameter metal particle by an acid and a filtrate;

a diagnosing means for diagnosing a state of said lubricated portion on the basis of the respective metal concentrations of said solution and said filtrate; and

a display means for displaying a result of diagnosis of said diagnosing means.

6. A system of diagnosing a lubricated portion as claimed in Claim 5, wherein the system of diagnosing the lubricated portion is provided with an wear depth calculating means for determining an wear depth in said lubricated portion from a total value of the respective metal concentrations of said solution and said filtrate, a memory means for storing the result of calculation by said wear depth calculating means, and a change rate calculating means for determining a rate of change of said wear depth in accordance with a time elapse from the result of calculation by said wear depth calculating means and the result of storage by said memory means, and said diagnosing means diagnosis the state of said lubricated portion on the basis of the result of calculation of said change rate calculating means.

7. A system of diagnosing a lubricated portion as claimed in Claim 5, wherein said filtrating means includes a filter having a hole diameter between 0.01 and 10.00 μm .

8. A system of diagnosing a lubricated portion as claimed

in Claim 5, wherein said emission spectrometry means is an emission spectrometry apparatus using an inductively coupled plasma.